

NOTES ON SOME PLANTS OF CUBA

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With two plates

THE PLANTS described in this paper were collected in Cuba in the summer of 1941 by the author. Headquarters during this collecting trip was the Atkins Institution of the Arnold Arboretum, at Soledad in southern Las Villas province. I am grateful to Mr. David Sturrock and the administration of the Soledad gardens for their many courtesies and for the privileges of using the facilities of the station.

Most of my collections during that summer were made in the San Juan and Trinidad Mountains and in southern Las Villas province. One short trip was made to the Oriente province with Brother Leon, of the Colegio de la Salle of Havana, and many of the new entities described in this paper were collected then. The trip to the Oriente and the territories in which collections were made were described by Brother Leon under the title, "Excursion Botanica a las Tierras de Moa" (De La Salle No. 225: 23-29, 1941). The collection numbers cited are my own. I am grateful to Brother Leon for the pleasure of accompanying him on that trip and also to Mr. George Bucher and Mr. J. R. Grist for the hospitality and assistance offered during our stay at Moa.

The description of a new species of *Neobracea* was supplied by Dr. Robert E. Woodson, Jr., of the Missouri Botanical Garden, and I am grateful to him for examining this material and supplying the name.

Rajania nipensis sp. nov. PLATE I, FIGS. 1-8.

Planta volubilis glabra; foliis 5-7 cm. inter se remotis; petiolis 3-4 cm. longis, teretibus; laminis late triangularibus vel ovato-triquetris vel trilobis, 6 cm. longis, 5-6 cm. latis, basi rotundatis vel truncatis, lobo medio lineari-attenuato, e basi 4 cm. longo, 1 cm. lato, 3-nervio, nervis lateralibus medio parallelibus margine supra medium confluentibus; lobis lateralibus oblongis vel rotundis, cum nervis 2 (3) arcuatis; inflorescentiis 2 vel 3 axillaribus, racemosis vel spicatis, 2.5-3.5 cm. longis; floribus congestis, cymis brevibus 0.5 mm. longis, 1-3-floris; perianthii segmentis ovatis, 6; staminibus 6, usque 0.3 mm. longis, antheris ovatis, introrse dehiscentibus.

ORIENTE: Sierra de Nipe near Woodfred, in flower July 28-29, 1941, *Howard 6136a* (GH, TYPE).

Rajania nipensis is similar to *R. prestoniensis* Knuth. It differs in having leaves which are rounded or truncate at the base and without a sinus. In addition, the middle lobe is 3-nerved and attenuate, not mucronate as in *R. prestoniensis*.

In the collection cited above is a single pistillate specimen tangled with

the staminate shoots selected as the type. This pistillate specimen has the mature leaves elongate-ovate, with the basal lobes rounded or poorly defined. The size and venation are approximately the same as in the type specimen. The pistillate inflorescences are fascicled in the leaf-axils, 3–5 being present per axil. The branches are racemose and 7–10 cm. long, although one or two measure 19 cm. in length. The individual flowers are solitary on pedicels nearly 2 mm. long which bear a lanceolate bract near the base. The flowers are 1–1.5 mm. high, with a 6-parted perianth. The perianth-segments are ovate and average 0.5 mm. in length. There are 6 staminodes present in the flower and these are minute and bifid at the apex. The three styles are well developed and also bifid. The ovary is strongly 6-lobed, the alternate lobes being large and small. Dissection of the small lobes reveals the locules, which are almost lost in the mass of sterile tissue. One locule is usually larger than the others and the ovules in this appear turgid. The other locules also have two superposed ovules but these are shrunken. Only a faint indication of a lateral gibbosity is developed in the specimen at hand; however, the condition of the ovules indicates that but one locule will develop and that the specimen is a true *Rajania*.

The young leaves are distinctly punctate-glandular, but the glands are fairly well masked in the mature lamina.

Rajania linearis (Griseb.) [Uline in msc. ex Knuth in syn.] Howard, comb. nov.

PLATE I, FIG. 9.

Dioscorea linearis Griseb. Cat. Pl. Cub. 251. 1866.

ORIENTE: Sierra de Nipe, 15 km. south of Woodfred, *Howard 6096* ♂. Collected in flower July 28–29, 1941.

The specimens cited above are staminate, but they appear to be identical with a pistillate specimen collected by Wright (3254, type number of *D. linearis* Griseb.) in the Gray Herbarium.

Wright's specimen bears an annotation, "*Rajania linearis* (Griseb.) Uline det. Uline." In Knuth's monograph of the Dioscoreaceae (Pflanzenreich IV.43: 168. 1924) this Wright number is divided. One pistillate portion is cited as *Dioscorea linearis* Griseb. and another pistillate specimen is referred to *Rajania microphylla* Knuth. The species of *Rajania*, however, is typified by staminate material collected by Poeppig, and no description of the cited pistillate specimen is given. I have not seen the Poeppig specimen nor any fragments of the Wright material that could possibly be referred to the description of that staminate plant.

The specimen of *Wright 3254* at the Gray Herbarium consists of a shoot with a series of female flowers and young fruits attached. These are definitely *Rajania* fruits, having one carpel developed into a wing, with the stylar portions asymmetrically placed. On the same sheet are two infructescences bearing fruits that are *Dioscorea* fruits and which have been annotated by Uline as *D. tamoidea* Griseb. These agree with the description given by Knuth for the fruits of *D. linearis*.

The specimen selected by Knuth as the type of *D. linearis* was in the

Berlin herbarium and is presumably destroyed. It seems necessary to conclude that his description of mature fruits of *D. linearis* was based on the unattached fragments of this Wright collection, which are fruits of *D. tamoidea* Griseb., as Uline noted.

The pistillate inflorescence of *Rajania linearis* is short and bears few flowers. Mature inflorescences of the specimen on hand are 1–1.5 cm. long and bear 3–5 flowers, of which 2 or 3 mature on the average. The one-winged samaras are smaller than those of the majority of species, being about 4–5 mm. wide and 8–10 mm. long. A solitary small seed is developed.

Dioscorea nipensis sp. nov. (Sect. *Lychnostemon* Uline). PLATE II, FIG. 1.

Planta volubilis, 4–6 m. alta, glabra; caulibus 1 mm. crassis, striatis; foliis 8–10 cm. inter se remotis, alternis; petiolis teretibus 3 cm. longis; laminis circumscriptione angusto-ovatis, veriter elongato-triquetris, 6–7 cm. longis, 2.5–3 cm. latis, apice attenuatis, basi rotundatis, sinu nullo, auriculis rotundatis, nervis 5, arcuatis; inflorescentiis ♂ 23–27 cm. longis, spicatis, floribus in capitulis dispositis, 2–4-glomerulatis, glomerulis 0.5–1 cm. inter se remotiusculis, bracteis 0.7 mm. longis, lanceolatis, perianthio 1.5 mm. diametro, lobis ovatis; staminibus fertilibus 3, usque 0.7 mm. longis, filamentis carnosius, antheris oblongis, thecis late distinctis, extrorse dehiscentibus; antheris sterilibus 3, usque 0.4 mm. longis, quam fertilibus brevioribus, perianthii lobis interioribus oppositis, antheris apice acutis, basi hastatis; rudimento stylo 3-lobato.

ORIENTE: 15 km. southwest of Compania de Moa mill, Moa, in flower July 25, 1941, *Howard 5873* (GH, TYPE).

This species is similar to *D. tamoidea* Griseb. It may be distinguished from that species by the leaves, which have rounded bases without sinuses, and by the longer narrow blades.

Like those of most specimens of *Dioscorea*, the leaves turn black on drying. The outer pair of lateral veins frequently fork very close to the base.

Rajania tenella sp. nov. PLATE II, FIG. 2.

Planta volubilis glabra; petiolis teretibus, gracilibus, 1.5–2 cm. longis; laminis elongato-triquetris, 5.5–7 cm. longis, 3.3–4 cm. latis, apice attenuatis, basi truncatis, sinu nullo, lobis obtusis, exs. papyraceis, nervis 3, medio a lateralibus parum distincto, lateralibus arcuatis margine confluentibus; inflorescentiis solitariis vel binis axillaribus, 2.5–4 cm. longis, leviter flexuosis, cymis lateralibus 3–4 mm. longis, 4–9-floris, floribus minutis, perianthio 1 mm. diametro, lobis 0.4–0.5 mm. longis, staminibus 6, usque 0.2 mm. longis, introrse dehiscentibus; rudimento stylo subnullo.

ORIENTE: Sierra de Nipe south of Woodfred, in dense woods, with yellow flowers, July 28–29, 1941, *Howard 6134* (GH, TYPE).

Rajania tenella is similar to *R. theresensis* Uline and *R. prestoniensis* Knuth, which I know only from the descriptions. It differs from *R. prestoniensis* in the shape of the blade, the mature leaves being without sinuses and attenuate rather than mucronate. It is unlike *R. theresensis* in having the leaves 3-nerved, the inflorescence much shorter than the

leaves, and the flowers smaller. It is easily distinguished from *R. nipensis* by the truncate base of the mature leaves.

Considerable variation occurs between the juvenile leaves and the mature leaves in most species of *Rajania* (Plate II, fig. 2). For example, the juvenile leaves of the present species are elongate-ovate with the basal lobes more or less developed. The laminae are 2.5–3 cm. long and 0.3–1 cm. wide. There are 3 primary veins, with the lateral veins arcuate. The apex is long-attenuate and the base is truncate or rounded. The petioles are terete and from 0.6–1.2 cm. long.

Because of this variation with age, care must be taken to collect and describe only mature specimens. Frequently the basal portion of a vine may be mature, but near the apex long axillary shoots, perhaps 4–9 feet long, may appear with only juvenile leaves. It is very easy to snatch immature material when such plants grow commonly in dense thickets.

Platygyne volubilis sp. nov. PLATE II, FIGS. 3–5.

Frutex monoicus scandens; ramis molliter ferrugineo-pubescentibus; foliis alternis, petiolatis (petiolis teretibus 4–6 mm. longis ferrugineo-pubescentibus) stipulatis ovatis, pubescentibus; laminis obovatis vel oblanceolatis, 5–6.5 cm. longis, 1.5–2.5 cm. latis, rigide membranaceis, basi cuneatis, apice acutis vel rotundatis, margine sinuatis, sparse dentatis, supra et margine urenti-pilosis, subtus sparse hispidis, nervis lateralibus 5, arcuatis, anastomosantibus; inflorescentiis foliis oppositis, ♂ racemosis, ramis usque 3–4 mm. longis, 3–5-floris, pedicellis 4–5 mm. longis; sepalis 4, usque 3.5 mm. longis, triangularibus vel lanceolato-ovatis, reflexis, extus dense strigosis, intus sparse strigosis; corollis nullis; staminibus 5–8, filamentis crassis, usque 1.5 mm. longis; rudimento pistilli nullo; inflorescentiis ♀ glomeratis vel breviter racemosis, ramis ad 2 mm. longis 3–5-floris, pedicellis brevibus, 2 mm. longis; perianthiis 6–9-lobatis, lobis variabilibus, lanceolatis vel ovato-oblongis, 4–5 mm. longis, urenti-ciliatis, extus strigosis; staminium rudimentis nullis; stylis 3, usque 5 mm. longis, oblongis apice bifidis carnosius, ferrugineo-strigosis; ovario globoso trilobato, sparse urenti-piloso; fructu tricocco 5 mm. longo, apice sparse piloso, pedunculo usque 4 mm. longo; columella 3 mm. alta; seminibus rotundis, 3 mm. diametro.

ORIENTE: 20 km. west of Moa, in open pine woods, in flower and fruit, July 26, 1941, *Howard 5961* (GH, TYPE).

Most of the plants of *Platygyne* that I had seen growing in the central and western provinces of Cuba had been low shrubs, semi-scrambling over low bushes and in fence rows. It was quite a surprise, therefore, to find in the pine woods west of Moa a specimen of *Platygyne* climbing in the branches of the tall pine trees. The specimen also had distinctive obovate leaves with cuneate bases, short inflorescences, and the fruits were almost without the stinging hairs so common in the only other species of *Platygyne* recognized at present, *P. hexandra* (Jacq.) Muell. Arg.

The indument in specimens of *Platygyne* is of interest because of the several types of hairs found on different parts of the plant. Of most interest to the collector are the short white stinging hairs found only on the leaves, perianth, and on the mature fruits of *P. hexandra*. This is quite

in contrast to the other common "ortiga" of Cuba, *Tragia* spp., in which stinging hairs are abundant on the stems as well as the leaves and inflorescences. In *Platygyne volubilis* the stinging pubescence is found only on the upper surface of the leaves and along the margins as cilia. The hairs on the surface of the leaf are usually single, while the ciliate margin consists of clusters of hairs. The pistillate perianth also has a ciliate margin of stinging hairs, but this is lacking on the staminate perianth. Finally, the fruits of *P. hexandra* are usually densely covered with the white pubescence of stinging hairs. In contrast the fruits of *P. volubilis* have only a few, if any, apical stinging hairs, and the rest of the capsule is covered with a very short ferrugineous indument.

The pubescence on the rest of the plant, including the perianth, staminal disk, and styles, consists of ferrugineous short pointed stiff hairs, best described as strigose.

The pistillate perianth is extremely variable. Baillon, Euphor. 453. 1858, believed the perianth consisted of two whorls, while Mueller, in DC. Prodr. 15: 913. 1864, called them all calyx-segments of one whorl. The outer segments are usually linear-lanceolate and uniform. The inner segments vary greatly in size and shape and are frequently fused and 3-4-lobed at the apex.

The seeds are 3 mm. in diameter and almost spheroid. Mature seeds of *P. volubilis* are gray and are lightly mottled with a dark brown color. The seeds of *P. hexandra* in all the fruiting specimens I have seen are tan, mottled with dark brown. The seeds of *Platygyne* do not have an aril, although a linear protuberance or hilum is present for about one-third the circumference of the seed.

Phyllanthus chryseus sp. nov.

Frutex parvus monoicus; ramis paenultimis teretibus robustis usque 5 mm. crassis; bracteis late triangularibus, apice acuminatis, 3 mm. longis, 2.5-3 mm. latis, castaneis, nitidis; ramulis foliigeris 20-28 cm. longis teretibus, 2 mm. crassis, 16-26-phyllis; stipulis minutis usque 1 mm. longis, triangularibus vel lanceolato-subulatis; foliis distichis, petiolis 2.5-3 mm. longis, laminis orbicularibus, basi rotundatis, apice rotundatis vel emarginatis, 2.5-3.5 cm. diametro, crasse coriaceis, chryseis exsiccate viridibus, nervis lateralibus inconspicuis, marginibus revolutis; floribus ♂ axillaribus 1-2, pedicellis 3 mm. longis; sepalis 4, late ovatis vel oblongis, 3.5 mm. longis, 5 mm. latis, carnosus, staminibus coalescentibus vel 1 mm. longis, sporangiis 4, antheris late ovatis, 0.7 mm. longis, extrorse et transverse dehiscentibus; floribus ♀ solitariis axillaribus, pedicellis 1.3 cm. longis, sepalis 4, ellipticis, 5 mm. latis, 4 mm. longis, apice rotundis; disco obscuro, ovario 5 mm. longo, stylis 3, fimbriato-laceratis, 4-9 partitis; fructibus tricoccis usque 5 mm. longis; seminibus oblongis, hebeti-nigris, profunde et crasse reticulatis, 4 mm. longis.

ORIENTE: 2' shrub, common in woods along ravine 15 km. southwest of Moa, leaves golden color, in flower and fruit July 26, 1941, *Howard 5829* (GH, TYPE); Moa, *Bucher 75* (NY); Río Cabanas, Moa, May 27-31, 1943, *Marie-Victorin & Clement 21755* (A).

This was a very striking plant in the field, for the brilliant golden leaves

were in contrast with the red iron soil on which it was growing. On drying the leaves turn light green above and pale brown beneath. This species is distinct from others in the *Orbicularia* section of *Phyllanthus* by its large orbicular leaves, which are numerous for their size. The bright golden color and strongly revolute margins of the leaves, the small stipules, and the short triangular bracts distinguish this species from others of the *P. cinctus* group as established by Carabia, in *Ecological Monographs* 15: 331. 1945.

In gross appearance *Phyllanthus chryseus* appears similar to *P. subcarnosus* Griseb., which is based on fragmentary material. An isotype of the latter species at the Gray Herbarium has a single fruit with unusually heavy capsules for *Phyllanthus*, and the seeds are smooth and brown. The dull black, coarsely and deeply reticulated seeds of the present species are distinct from any I have seen in this genus, but so few seeds have been described that I can not evaluate this character.

Eugenia moaensis sp. nov.

Frutex glaber; ramis hornotinis teretibus vel subcompressis, ferrugineis; petiolis 2–4 mm. longis, 1.5 mm. crassis, sulcatis; laminis lanceolato-ovatis vel ellipticis, 5.5–6.5 cm. longis, 2–2.5 cm. latis, basi et apice acutis, apice emarginatis, coriaceis, nervo medio supra leviter impresso, subtus prominente, nervis lateralibus anastomosantibus, margine revolutis; inflorescentiis axillaribus, pedicellis solitariis vel 2–3-fasciculatis, 6–10 mm. longis, bracteis minutis, 2, ciliatis; calycis lobis 4, ovatis, 2 mm. longis et latis, ciliatis; petalis 4, oblongis, 4 mm. longis, 1–1.2 mm. latis, ciliatis; staminibus numerosis 2 mm. longis; stylo 3 mm. longo; ovario 3-loculato, ovulis numerosis; baccis 5–7 mm. diametro, pericarpio crasso succulento, dense glanduloso; seminibus 1 vel 2, rotundatis vel subreniformibus 3–5 mm. longis, testa brunnea membranacea nitida.

ORIENTE: 7' shrub, flowers yellow, fruits green, along creek bank at Moa, *Howard* 5866 (GH, TYPE).

The leaves of the present species are thick and coriaceous. The upper surface is shiny when dry and darker in color than the lower surface. Punctate glands are present in the lamina but are well hidden in the tissues of the leaf. Approximately 6 strong lateral veins are revealed on the upper leaf-surface, and these anastomose near the margin. The veins are obscure below.

Eugenia moaensis appears to be similar to *E. (?) Ossaeana* Urb., which was described on very incomplete material collected by Shafer in the same locality as the present specimen. It is different in being completely glabrous, except for a ciliate perianth, and the venation of the leaves does not agree with the description as given by Urban. The pedicels of the present species are much longer than those of *E. (?) cupuligera* Urb., to which this plant is also similar. *Eugenia moaensis* may also be related to *E. cristalensis* Urb.; however, it differs from this in the leaf-characters and the leaf-size.

Calyptranthes oblongifolia sp. nov.

Frutex; ramis hornotinis compressis, sub interstitiis foliorum plus

minusve sulcatis, pilis dibrachiatis adpressis ferrugineis vel pallescentibus vestitis, annotinis glabrescentibus teretibus vel lineato-striatis, dichotomis; petiolis 4–5 mm. longis subteretibus supra sulcatis; laminis oblongis vel oblongo-lanceolatis, 4.5–7 cm. longis, 1.5–2 cm. latis, basi rotundatis, antice acutis vel rotundatis, nervo medio supra per totam longitudinem anguste impresso, nervis lateralibus ca. 15 inconspicuis; inflorescentiis ad basin ramorum hornotinorum binis, subcapitatis; pedunculis 2–4, 2–5 mm. longis, capitulis 3–5-floris; baccis nigro-purpurascens, depresso sphaeroideis, 5–7 mm. diametro, loculis 2; seminibus reniformibus 2 in quoque loculo, 3 mm. longis.

ORIENTE: Along south coast of Bahia de Moa near Moa, 4' shrub, fruits green becoming purple on maturity, *Howard 5948* (GH, TYPE).

Calyptranthes oblongifolia is characterized by the oblong or lanceolate-oblong leaves and the few-flowered, very short peduncles of the seemingly capitate, axillary inflorescence. In general appearance this species is similar to *C. rupicola* Urb. and *C. heterochroa* Urb.

The occurrence of malpighiaceae or two-armed hairs on the plant is characteristic of several species of *Calyptranthes*. In the present species these hairs are very dense on the young leaves, the stems, peduncles, flowers and fruits, giving the appearance of a ferrugineous tomentum. In the older leaves the hairs are broken off even with the epidermis and leave the sunken hair-bases commonly found in the other species and which frequently seem to be mistaken for epidermal glands. The upper surface of the mature leaves of *C. oblongifolia* is glabrous except for the impressed midrib, while the hairs on the lower surface persist. These hairs usually remain ferrugineous in color, although many turn gray or white.

The inflorescence consists of short axillary peduncles with a very few flowers and appears to be capitate. The bracts subtending the flowers are minute and fall away very early, none appearing in the mature infructescences. The flowers had matured on the specimens studied, but several young fruits still possessed 3 or 4 stamens attached to the hypanthium at the line of dehiscence of the calyptra. The style was 2 mm. long and bifid at the apex. The calyptra was conical and about 1.2 mm. in diameter.

The drupes are a dark purple color when fresh, drying black or brown. Because of the dense pubescence, many appear to be silvery in reflected light. There are 2 cells to the ovary, each containing 2 seeds. The seeds are reniform and tan on the convex surface and black or dark brown on the sides and in the concave surface. The embryo is curved.

Psidium confertum sp. nov.

Frutex vel arbor parva; ramis hornotinis plus minusve compressis tenuibus vix 1.5 mm. latis, tomentosis, pilis crispis, vetustioribus ferrugineis; petiolis 2–2.5 mm. longis, laminis ovatis vel ellipticis, 2–2.8 cm. longis, 1.4–1.6 cm. latis, basi rotundatis, apice rotundis vel parce emarginatis, margine recurvo, nervo medio supra impresso, subtus prominente, nervis lateralibus obsoletis; cymis axillaribus dense tomentosis, 3–5-floris, rhachi 4–6 mm. longa, pedunculis 0.8–1.1 cm. longis; calycibus 4-lobatis, leviter imbricatis, tomentosis, lobis ovatis 1–2 mm. longis; petalis 4 vel 5, ovatis,

extus sparse pubescentibus, dense glandulosis; staminibus numerosis; stylis 2 mm. longis; ovario 2-loculari, ovulis in quoque loculo ca. 10; seminibus reniformibus 2 mm. longis; fructibus immaturis, stylis usque 9 mm. longis.

ORIENTE: Wet hillside near the airfield at Moa, 12' shrub collected in flower and young fruit July 26, 1941, *Howard 5901* (GH, TYPE).

Psidium confertum is characterized by the small ovate to elliptic leaves, the persistent ferrugineous tomentum, the cymose inflorescence, and the 2-celled ovary. In these characters it differs from *P. bullatum* Brit., *P. ophiticola* Brit. & Wils., and *P. leiophloeum* Urb., to which it is related.

The species is named for the crowded condition of the flowering shoots. The internodes are from 1–1.5 cm. long with the leaves opposite or in whorls of three at the nodes. The compact inflorescence adds to the density of the shoots.

The leaves are densely glandular; however, the glands are hidden by the persistent tomentum on the lower surface and are not visible from the dorsal surface. The very young leaves are densely pubescent on both surfaces. The lower surface remains persistently pubescent, while the upper surface is glabrous and becomes a bright yellow-green color on maturity.

Two small bracts subtend the flower. The buds are globose above the ovary. Mature fruits are 5–6 mm. in diameter, and the numerous seeds are reniform, about 2 mm. long. On the concave surface of each seed extending over the sides are areas which are dark brown to black in color. The remaining surface of the seed is a yellow-brown. The embryo is only slightly curved.

Eugenia Sturrockii sp. nov.

Arbor parva vel frutex, glaber; ramis hornotinis compressis, sub interstitiis foliorum plus minusve sulcatis; petiolis 3–4 mm. longis, subteretibus supra sulcatis; laminis anguste lanceolatis 4.5–5 cm. longis, 0.8–1 cm. latis, basi et apice acuminatis, coriaceis glabris, supra nitidis, marginibus revolutis, nervis lateralibus inconspicuis; inflorescentiis axillaribus, racemosis, racemis usque 2 mm. longis, bracteis ovato-lanceolatis, minutis; 4–5-floris, pedunculis 5–7 mm. longis; sepalis 4, ovatis, usque 1 mm. longis, glabris; petalis non visis; staminibus numerosis, subaequalibus; stylo 2 mm. longo; baccis 4 mm. diametro, loculis 2, seminibus reniformibus vel ovalibus, 1 in quoque loculo, 2.5 mm. longis, testa membranacea, levi, brunnea, nitida.

ORIENTE: 8' shrub or small tree in dense woods of ravine, 15 km. southwest of Compania de Moa mill, Moa, collected July 26, 1941, *Howard 6034* (GH, TYPE).

This species is named in honor of Mr. David Sturrock, who was Superintendent of the Atkins Institution of the Arnold Arboretum at Soledad, Cuba, for many years and who was so very helpful in arranging my trip to the Oriente.

This species at first glance is similar in appearance to *E. psiloclada* Urb. However, the leaves of the new species are coriaceous, the veins obscure, the upper surface shiny, and the margin strongly recurved. *Eugenia psiloclada*, by contrast, has thin leaves with veins and glands prominent,

dull surfaces, and perfectly flat margins. The leaves of *E. Sturrockii* have the characteristic glands, but these are buried in the leaf-tissue and are visible only when the leaf is held to the light.

Several of the fruits examined had only one mature seed. Closer examination revealed an aborted cell and ovule at the apex of the fruit. The flowers are articulated to the pedicel, the fruits dehisce at this point very readily, and the peduncles persist even on the old shoots.

Neobracea Howardii Woodson, sp. nov.

Frutex ramosus ca. 2 m. altus, ramis teretibus cortice luteo, ramulis puberulis tandem glabratiss. Folia opposita petiolata, lamina late elliptica apice obtusa basi latiuscule acuta 4–7 cm. longa 2–3.5 cm. lata firmiter membranacea supra nitidula subtus dense puberula, petiolo 0.4–0.8 cm. longo puberulo. Inflorescentia racemosa subcorymbiformis terminalis vel subterminalis pluriflora, pedunculo tenui ca. 3–4 cm. longo puberulo, pedicellis ca. 0.5 cm. longis puberulis, bracteis lineari-oblongolatis usque 0.5 cm. longis subfoliaceis. Flores albi, calycis laciniis anguste lanceolatis acuminatis 0.5 cm. longis subfoliaceis ut in pedicello vestitis intus in sinibus 0–2-glandulosis, corollae subinfundibuliformis tubo ca. 0.9 cm. longo basi ca. 0.1 cm. diam. faucibus usque 0.25 cm. diam. ampliatis extus sparse irregulariterque pilosulo intus prope basim staminifero, lobis late oblongo-dolabriformibus ca. 0.8 cm. longis. Antherae subsessiles lineari-lanceolatae basi anguste sagittatae ca. 0.3 cm. longae dorso dense puberulae. Ovaria oblongoidea glabra ca. 0.15 cm. longa, nectaria 5 compresse subquadrata ca. 0.05 cm. longa, stylo crassiusculo ca. 0.2 cm. longo, stigmate capitato 5-maniculato ca. 0.05 cm. longo apice papillato. Folliculi immaturi tenues remote moniliformes.

LAS VILLAS: Limestone Loma Ventana, Trinidad Mountains, San Blas-Buenos Aires, Aug., 1941, *Howard 6495* (Herb. Missouri Bot. Gard., TYPE).

This species is very well marked by its abundant pubescence and broad, elliptic foliage, as well as the several-flowered inflorescence.

Since the publication of my revision of *Neobracea* (in Ann. Missouri Bot. Gard. 23: 169. 1936), I have examined a flowering specimen of *N. Ekmanii* Urb., the type and heretofore the only known specimen of which was in fruit, and that apparently mislaid when I visited the herbarium at Dahlem in 1930. The flowering specimen was collected by Mrs. G. C. Bucher during the summer of 1939 near Moa, Oriente, Cuba. The corolla, apparently pink, is very broadly infundibuliform, the proper tube 6 mm. long, 1 mm. in diameter at the orifice, the lobes 10 mm. long. The calyxlobes are linear-lanceolate, 2 mm. long.

Bonnetia cubensis (Brit.) comb. nov.

Kieseria cubensis Brit. in Bull. Torr. Bot. Club 41: 19. 1914.

Bonnetia Mart. & Zucc. has been conserved (Kew Bull. 1940: 113. 1940) and *Kieseria* Nees has been rejected. A new combination is needed for this Cuban species.

The species is apparently endemic along the coast of Bahia de Moa on serpentine soil. The type collection was made in 1914 and only two more recent collections are known, *Howard 5842*, a 15' tree with pink flowers

collected July 26, 1941, in dense woods 15 km. southwest of Compania de Moa mill, and *Marie-Victorin, Clement & Alain 21436*, collected in flower April 1943 at the mouth of the Punta Gorda River at Moa.

Buxus flaviramea (Brit.) comb. nov.

Tricera flaviramea Brit. in Bull. Torr. Bot. Club 42: 499. 1915.

A second record of this species is *Howard 5100*, collected June 15, 1941, in open grassy savannah 10 km. west of Santa Clara city, Las Villas Prov.

Xyris Jupicai Rich. in Act. Soc. Hist. Nat. Paris 1: 106. 1792.

This is a very widely distributed species through the Antilles, but the present collection (*Howard 6011*, in flower, July 26, 1941, airfield at Moa, Oriente) is of interest since it is the first representative of the genus known to me from the Oriente. The many species of *Xyris* in Cuba are centered in Pinar del Rio province, with two species reaching the Cienaga swamps in southwestern Las Villas province. The present collection consists of larger and more tuberculate plants than the average, but the specimens still fit within the limits of the species as defined by Malme in N. Am. Fl. 19: 11. 1937.

Cassia clarensis (Brit.) comb. nov.

Chamaecrista clarensis Brit. in N. Am. Fl. 23: 278. 1930.

Cassia insularis (Brit. & Rose) comb. nov.

Chamaefistula insularis Brit. & Rose. in N. Am. Fl. 23: 239. 1930.

In addition to those from the type localities, specimens of these two species are known from the Castillo de Jagua and the coast of Cienfuegos Bay.

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EXPLANATION OF PLATES

PLATE I

FIGS. 1-8. *Rajania nipensis* Howard (*Howard 6136a*): 1. habit, ♀ × 1/2; 2. single flower from portion of ♀ inflorescence, × 6; 3. portion of ♀ flower showing the 3 bifid styles and 2 of the bifid staminodes, × 15; 4. cross-section of the ovary showing the six lobes and the 3 locules, one of which has fertile ovules, × 15; 5. sagittal section of flower showing two superposed fertile ovules, × 8; 6. habit, ♂ × 1/2; 7. portion of ♂ inflorescence, × 3; 8. ♂ flower showing pistil-rudiment and 6 introrse fertile stamens, × 15. FIG. 9. *Rajania linearis* (Griseb.) Howard (*Howard 6096*): habit, × 1/2.

PLATE II

FIG. 1. *Dioscorea nipensis* Howard (*Howard 5873*): habit, × 1/2. FIG. 2. *Rajania tenella* Howard (*Howard 6134*): habit, × 1/2. FIGS. 3-5. *Platygyne volubilis* Howard (*Howard 5961*): 3. habit, × 1/2; 4. dorsal view of fruit, × 1.5; 5. lateral view of fruit, × 1.5.